

Customer No. 38107**Listing of Claims**

1. (Previously Presented) A device for generating X-rays, which device comprises a source for emitting electrons, a carrier which is rotatable about an axis of rotation and which is provided with a material which generates X-rays as a result of the incidence of electrons, a heat absorbing member arranged between the source and the carrier, and a cooling system which is in thermal connection with the heat absorbing member, wherein during operation a rate of heat absorption by the heat absorbing member is substantially larger than a rate of heat transfer via the thermal connection, wherein the thermal connection between the heat absorbing member and the cooling system comprises a thermal barrier which limits the rate of heat transfer, occurring via the thermal connection per unit of temperature difference between the heat absorbing member and the cooling system, in a predetermined manner; wherein the thermal barrier comprises a vacuum gap which is present between a radiant heat transferring surface of the heat absorbing member and a radiant heat transferring surface of the cooling system.

2. (Cancelled)

3. (Previously Presented) A device as claimed in claim 1, wherein the thermal barrier comprises a mounting member by means of which the heat absorbing member is mounted in the device, said mounting member having a dimension, seen in a direction parallel to an electron beam path of the source, which is substantially smaller than a dimension of the heat absorbing member in said direction.

4. (Previously Presented) A device as claimed in claim 3, wherein the heat absorbing member is substantially rotationally symmetrical relative to the electron beam path, and the mounting member is annular and concentric relative to the electron beam path.

5. (Previously Presented) A device as claimed in claim 3, wherein the mounting member is made from a material having a thermal conductivity which is lower than a thermal

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conductivity of a material from which the heat absorbing member is made.

6. (Previously Presented) A device as claimed in claim 3, wherein the mounting member is made from stainless steel.

7. (Previously Presented) A device as claimed in claim 3, wherein the heat absorbing member has a first side facing the carrier and a second side facing away from the carrier, the mounting member being in thermal contact with the heat absorbing member near said second side.

8. (Cancelled)

9. (Previously Presented) A device as claimed in claim 1, wherein the heat absorbing member is made from a material selected from the group consisting of molybdenum, tungsten, and graphite.

10. (Previously Presented) A device as claimed in claim 1, wherein a side of the heat absorbing member facing the carrier has an electron absorbing surface which is concave as seen from an impingement position of the electrons on the carrier.

11. (Currently Amended) A device for generating X-rays comprising:

a source for emitting electrons,

a carrier which is rotatable about an axis of rotation and which is provided with a material which generates X-rays as a result of the incidence of electrons,

a heat absorbing member arranged between the source and the carrier such that substantially all of backscatter radiation strikes the surface of the heat absorbing member, and

a thermal connection located between the heat absorbing member and a cooling system, comprising a separate and distinct component from said thermal connect and through which cooling fluid flow, the thermal connection located such that the thermal connection is not exposed to the backscatter radiation, the thermal connection comprising a thermal barrier comprised of a different material than that which comprises cooling system

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such that the thermal barrier limits the rate of heat transfer from the heat absorbing member to the cooling system in a predetermined manner.

12. (New) The device as claimed in claim 11, wherein the heat absorbing member is made from a material selected from the group consisting of molybdenum, tungsten, and graphite.

13. (New) A device for generating X-rays comprising:

a source for emitting electrons,

a carrier which is rotatable about an axis of rotation and which is provided with a material which generates X-rays as a result of the incidence of electrons,

a heat absorbing member arranged between the source and the carrier to absorb backscatter radiation,

a cooling system comprising a housing and a cooling fluid passing therethrough; and

a thermal connection located between, and distinct from, the heat absorbing member and the housing of the cooling system, the thermal connection comprising a thermal barrier that limits the rate of heat transfer from the heat absorbing member to the cooling system housing in a predetermined manner.

14. (New) A device as claimed in claim 13, wherein the heat absorbing member is made from a material selected from the group consisting of molybdenum, tungsten, and graphite.

15. (New) The device as claimed in claim 13, wherein the thermal connection is substantially free from exposure to backscatter radiation.

16. (New) The device as claimed in claim 13, wherein the heat absorbing member includes a peripheral surface that contacts a surface of the thermal connection, wherein the peripheral surface of the heat absorbing member is substantially smaller than the contact surface of the thermal connection.

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17. (New) The device as claimed in claim 13, wherein the heat absorbing member includes a peripheral surface, wherein a first portion of the peripheral surface contacts the thermal connection and second portion of the peripheral surface does not contact any surfaces.

18. (New) The device as claimed in claim 13, wherein the heat absorbing member includes a concave electron absorbing surface.